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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,088	05/24/2006	Hubert Lang	LANG ET AL-1 PCT	8713
25889	7590	10/05/2009		
COLLARD & ROE, P.C. 1077 NORTHERN BOULEVARD ROSLYN, NY 11576			EXAMINER SAVAGE, JASON L	
			ART UNIT	PAPER NUMBER
			1794	
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			10/05/2009	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/575,088	<b>Applicant(s)</b> LANG ET AL.	
	<b>Examiner</b> JASON L. SAVAGE	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 2-23 is/are pending in the application.
- 4a) Of the above claim(s) 15-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 2-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20060524, 20080305, 20090710</u> .                            | 6) <input type="checkbox"/> Other: _____                          |

***Election/Restrictions***

Claims 15-23 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 7-10-09.

Applicant argues that the amended claim reciting a method in claims 15-23 are sufficiently related to the anti-friction coating claims elected in Group II to warrant their consideration and that any search for group I would necessarily include a search for the inventions embodied in the remaining groups.

However, as recited in the restriction requirement, the claimed article of Group II would not require the same special technical feature of the method of Group III which employs a cold gas spraying process. Although Group II has now been added to recite the limitation that a cold spraying process is employed to form the article, it can be formed by alternate methods. Regarding the argument that a search for the article of Group II would necessarily include a search for the inventions embodied in the other Groups, search for the claimed method of Group III would require additional searching which is not necessary for the article as asserted. As such, the restriction is considered proper and herein made FINAL.

Applicant's statement that it is believed the objective to streamline examination and compact prosecution would be promoted if a search were conducted simultaneously for all group is noted. However the additional searching and prosecution of patentably distinct inventions places additional and unnecessary burden on the

Art Unit: 1794

Examiner. Should the product claims be found to be allowable, rejoinder of the withdrawn process claims will be considered at that time.

### ***Claim Rejections - 35 USC § 112***

Claims 2-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949).

Regarding claims 2-3, 5, 8 and 10-11, they recite the broad recitation for a property of the coating, and the claims also recites a preferred range which is a narrower statement of the range/limitation.

Art Unit: 1794

Regarding claims 6 and 9, they recite the broad recitation for that a material is selected from carbon, and the claims also recites the carbon is (graphite) and (diamond) in claims 6 and 9 respectively which is a narrower statement of the range/limitation.

Regarding claims 12 and 13, they recite the broad recitation for that a material, and the claims also recites "in particular a bearing anti-friction coating" in claims 12 and "for example a supporting layer made from steel" or "in particular for an anti-friction bearings or thrust washers" in claim 13 which are narrower statements of the range/limitation.

For Examination purposes, the above cited claims have been interpreted being drawn to the broader embodiments recited in the claim.

### ***Claim Rejections - 35 USC § 102/103***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-4, 6 and 8-12 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Raybould et al (US 2006/0093736).

Regarding claim 12, Raybould teaches coating materials a sprayed coating which provides desirable friction sliding properties for a bearing surface comprising a matrix forming material such as nickel or iron alloys (par[0015-0016]). Raybould further teaches that good anti-friction properties can be achieved by providing mixtures of hard and soft phase materials and dispersed in the matrix material (par[0018]).

Raybould is silent to the soft and/or hard phase elements forming a solid solution or bond with the matrix, however since Raybould teaches the same soft and hard phase materials as claimed and forming the coating by a substantially similar method such as cold gas-dynamic spraying (par[0005]), it is the position of the Examiner that the claim limitation of forming a solid solution or bond would have been met.

In the alternative, it would have been obvious to have formed the anti-friction coating by employing a cold gas-dynamic spraying process which would result in the hard and soft phase materials being incorporated and bonded to the matrix material with a reasonable expectation of success.

Regarding claim 2, Raybould teaches that it is known to employ particle sizes between 5-50 microns (par[0021]).

Regarding claim 3, Raybould is silent to the bond thickness, however since Raybould teaches applying the same materials using a substantially similar method,

Art Unit: 1794

one of ordinary skill would expect the bond thickness would fall within the claimed range.

Regarding claim 4, Raybould teaches that nickel and iron are known to be suitable for use as matrix elements in anti-friction sliding coatings.

Regarding claim 6, Raybould teaches as soft phase materials include lead, silver, copper oxide, barium, magnesium fluoride, copper, cobalt, rhenium and alloys thereof. (par[0018]).

Regarding claim 8, Raybould teaches that the proportion of a \soft phase particles is between 5-45% (claim 4).

Regarding claims 9-10, Raybould teaches the hard phase materials may be selected from a variety of materials including those containing some of the claimed elements in claim 9 and hard phase materials in claim 10 such as Bn, carbides, oxides and mixtures thereof (par[0018]).

Regarding claim 11, Raybould teaches that the proportion of a hard phase particles is between 5-45% (claim 3) which overlaps and anticipates the claimed range between 5-25 wt%.

### ***Claim Rejections - 35 USC § 103***

Claims 5, 7 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raybould et al (US 2006/0093736).

Art Unit: 1794

Regarding claim 5, Raybould teaches that the proportion of a hard or soft phase particles is between 5-45% (claim 3-4) which would make having a proportion of a matrix element of between 55-95% obvious to one of ordinary skill in the art.

Regarding claim 7, Raybould does not recite the claimed materials, however it teaches similar materials such as the use of barium so it would have been obvious to have used similar and alternate soft phase materials including those claimed by Applicant with a reasonable expectation of success.

Regarding claims 13-14, Raybould does not exemplify an embodiment wherein at least two coatings are applied or wherein an intermediate layer is provided between the coatings. However, it is well known in the art to apply additional coating layers for sliding bearing component including the use of intermediate layers. It would have been obvious to one of ordinary skill in the art at the time of the invention to have applied other conventional coating material layers to the bearing of Raybould with a reasonable expectation of success.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON L. SAVAGE whose telephone number is (571)272-1542. The examiner can normally be reached on M-F 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on 571-272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 1794

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason Savage/  
Examiner  
9-30-09

/JENNIFER MCNEIL/  
Supervisory Patent Examiner, Art Unit 1794